

**Supplementary File 2** List of species with confirmed bioactivities of ND relevance by category

References can be found via Supplementary Files 1 and 7

**Group 1** Protein misfolding/ protein quality control enhancement and associated activities

Bioactivity category	Species [+ sister species]
Anti-amyloidogenic/ protection vs amyloid-induced toxicity	<i>Acridocarpus orientalis</i> , <i>Allium sativum</i> , <i>Apium graveolens</i> , <i>Asparagus racemosus</i> , <i>Bacopa monnieri</i> , <i>Cajanus cajan</i> , <i>Camellia sinensis</i> , <i>Capsicum annuum</i> , <i>Centella asiatica</i> , <i>Chromolaena odorata</i> , <i>Cocos nucifera</i> , <i>Convolvulus prostratus</i> , <i>Cornus officinalis</i> , <i>Cuminum cyminum</i> , <i>Curcuma longa</i> , <i>Cyperus rotundus</i> , <i>Elaeis guineensis</i> , <i>Fibraurea recisa</i> , <i>Garcinia mangostana</i> , <i>Moringa oleifera</i> , <i>Myristica fragrans</i> , <i>Olea europaea</i> , <i>Paeonia lactiflora</i> , <i>Panax quinquefolius</i> , <i>Phyllanthus emblica</i> , <i>Prunella vulgaris</i> , <i>Rosmarinus officinalis</i> , <i>Scoparia dulcis</i> , <i>Silybum marianum</i> , <i>Uncaria tomentosa</i> , <i>Vitis vinifera</i> [sister spp.]: <i>Caesalpinia sappan</i> , <i>Coptis chinensis</i> , <i>Elsholtzia rugulosa</i> , <i>Fragaria x ananassa</i> , <i>Panax ginseng</i> , <i>Pistacia lentiscus</i> , <i>Salvia miltiorrhiza</i> , <i>Satureja hortensis</i> , <i>Uncaria rhynchophylla</i>
Anti-tauopathic	<i>Acridocarpus orientalis</i> , <i>Allium cepa</i> , <i>Apium graveolens</i> , <i>Camellia sinensis</i> , <i>Cinnamomum verum</i> , <i>Cocos nucifera</i> , <i>Convolvulus prostratus</i> , <i>Crataegus spp.</i> , <i>Curcuma longa</i> , <i>Fibraurea recisa</i> , <i>Malus pumila</i> , <i>Moringa oleifera</i> , <i>Morus alba</i> , <i>Olea europaea</i> , <i>Passiflora edulis</i> , <i>Psidium guajava</i> , <i>Uncaria tomentosa</i> , <i>Zataria multiflora</i> [sister spp.]: <i>Cinnamomum cassia</i> , <i>Fragaria x ananassa</i> , <i>Myrica cerifera</i>
Reverses TDP-43 aggregation/ normalization	<i>Mucuna pruriens</i> , <i>Withania somnifera</i> [sister spp.]: <i>Coptis chinensis</i>
Anti- $\alpha$ -synucleinopathic, modulation of serotonergic neurotransmission	<i>Allium cepa</i> , <i>Asparagus racemosus</i> , <i>Camellia sinensis</i> , <i>Coptis spp.</i> ; <i>Fagopyrum esculentum</i> , <i>Ficus religiosa</i> , <i>Juglans regia</i> , <i>Maclura tinctoria</i> , <i>Malus pumila</i> , <i>Melissa officinalis</i> , <i>Mentha canadensis</i> , <i>Mucuna pruriens</i> , <i>Ocimum basilicum</i> , <i>Olea europaea</i> , <i>Panax quinquefolius</i> , <i>Portulaca oleracea</i> , <i>Psidium guajava</i> , <i>Pulicaria undulata</i> , <i>Punica granatum</i> , <i>Rhus chinensis</i> , <i>Rosmarinus officinalis</i> , <i>Scutellaria baicalensis</i> , <i>Silybum marianum</i> , <i>Tinospora cordifolia</i> , <i>Vitis vinifera</i> [sister spp.]: <i>Musa acuminata</i> , <i>Vaccinium uliginosum</i>
Prion protein inhibition	<i>Camellia sinensis</i> , <i>Musa x paradisiaca</i> , <i>Rhus chinensis</i> , <i>Vitis vinifera</i> [sister spp.]: <i>Stephania tetrandra</i>
Huntingtin protein inhibition	<i>Camellia sinensis</i> [sister spp.]: <i>Coptis chinensis</i> , <i>Panax ginseng</i>
Hsp modulation/improved misfolded protein translocation	<i>Allium sativum</i> , <i>Annona muricata</i> , <i>Azadirachta indica</i> , <i>Eucommia ulmoides</i> , <i>Glycyrrhiza glabra</i> , <i>Nasturtium officinale</i> , <i>Vaccinium spp.</i> , <i>Withania somnifera</i> [sister spp.]: <i>Allium sp.</i> , <i>Artemisia asiatica</i> , <i>Astragalus lentiginosus</i> , <i>Trichilia emetica</i> , <i>Uncaria rhynchophylla</i>
Enhanced proteasome	<i>Brassica oleracea</i> , <i>Olea europaea</i> , <i>Vitis vinifera</i>
ER stress inhibition	<i>Allium cepa</i> , <i>Brassica oleracea</i> , <i>Camellia sinensis</i> , <i>Malus pumila</i> , <i>Vitis vinifera</i>
Autophagy regulation, reduced autophagic stress	<i>Carissa carandas</i> , <i>Coptis spp.</i> , <i>Eucommia ulmoides</i> , <i>Malus pumila</i> , <i>Moringa oleifera</i> , <i>Polygala tenuifolia</i> , <i>Punica granatum</i> [sister spp.]: <i>Panax ginseng</i> , <i>Uncaria rhynchophylla</i>
Anti-venom	<i>Abutilon indicum</i> , <i>Acalypha indica</i> , <i>Albizia lebbeck</i> , <i>Alchornea laxiflora</i> , <i>Allium cepa</i> , <i>Allium sativum</i> , <i>Alstonia scholaris</i> , <i>Asparagus racemosus</i> , <i>Althaea officinalis</i> , <i>Annona senegalensis</i> , <i>Aristolochia indica</i> , <i>Bixa orellana</i> , <i>Bobgunnia madagascariensis</i> , <i>Butea monosperma</i> , <i>Calotropis procera</i> , <i>Cardiospermum halicacabum</i> , <i>Carica papaya</i> , <i>Casearia sylvestris</i> , <i>Cassia fistula</i> , <i>Cissampelos pareira</i> , <i>Clerodendrum glabrum</i> , <i>Combretum molle</i> , <i>Crescentia cujete</i> , <i>Crosopteryx febrifuga</i> , <i>Cymbopogon proximus</i> , <i>Dipteryx alata</i> , <i>Euphorbia hirta</i> , <i>Ficus platyphylla</i> , <i>Flueggea virosa</i> , <i>Gymnema sylvestre</i> , <i>Heliotropium indicum</i> , <i>Ipomoea pes-caprae</i> , <i>Jatropha curcas</i> , <i>Jatropha gossypifolia</i> , <i>Justicia adhatoda</i> , <i>Kalanchoe pinnata</i> , <i>Kigelia africana</i> , <i>Lactuca serriola</i> , <i>Lantana trifolia</i> , <i>Leucas aspera</i> , <i>Maesa lanceolata</i> , <i>Marsilea quadrifolia</i> , <i>Mesua ferrea</i> , <i>Mimosa pudica</i> , <i>Momordica charantia</i> , <i>pruriens</i> , <i>Parinari curatellifolia</i> , <i>Parkia biglobosa</i> , <i>Paullinia pinnata</i> , <i>Piper auritum</i> , <i>Pupalia lappacea</i> , <i>Rothea myricoides</i> , <i>Schwenckia americana</i> , <i>Sida acuta</i> , <i>Sclerocarya birrea</i> , <i>Tamarindus indica</i> , <i>Trianthema portulacastrum</i> , <i>Tylophora indica</i> , <i>Vitex negundo</i> , <i>Waltheria indica</i> , <i>Withania somnifera</i> , <i>Ximenia caffra</i> , <i>Zanthoxylum capense</i> , <i>Ziziphus mucronata</i> , <i>Ziziphus spina-christi</i> , <i>Guiera senegalensis</i> [sister spp.]: <i>Curcuma sp.</i> , <i>Fagonia cretica</i> , <i>Sterculia setigera</i> , <i>Vellozia flavigans</i> , <i>Vochysia haenkeana</i>
Neuroprotective/nerve tonic	<i>Achyranthes aspera</i> , <i>Acorus gramineus</i> , <i>Aerva javanica</i> , <i>Albizia lebbeck</i> , <i>Artemisia judaica</i> , <i>Asparagus racemosus</i> , <i>Azadirachta indica</i> , <i>Bixa orellana</i> , <i>Brassica oleracea</i> , <i>Calendula officinalis</i> , <i>Cassia fistula</i> , <i>Castanea sativa</i> , <i>Celastrus paniculatus</i> , <i>Convolvulus prostratus</i> , <i>Elaeis guineensis</i> , <i>Embelia ribes</i> , <i>Emilia coccinea</i> , <i>Elettaria cardamomum</i> , <i>Eriodictyon crassifolium</i> , <i>Eugenia dysenterica</i> , <i>Evolvulus alsinoides</i> , <i>Heinsia crinita</i> , <i>Jasminum grandiflorum</i> , <i>Juniperus oxycedrus</i> , <i>Lycium shawii</i> , <i>Mentha spp.</i> , <i>Malus pumila</i> , <i>Morinda citrifolia</i> , <i>Oenanthe javanica</i> , <i>Pergularia daemia</i> , <i>Portulaca oleracea</i> , <i>Pulicaria undulata</i> , <i>Punica granatum</i> , <i>Solanum dasiphllum</i> , <i>Vitex negundo</i> , <i>Voacanga africana</i> , <i>Zanthoxylum capense</i> [sister spp.]: <i>Dioscorea japonica</i> , <i>Dioscorea nipponica</i> , <i>Fragaria x ananassa</i> , <i>Phragmanthera austroarabica</i> , <i>Piper sarmentosum</i> , <i>Ribes fasciculatum</i> , <i>Taraxacum coreanum</i>

**Group 2** ND disease symptoms and their alleviation

Bioactivity category	Species [+ sister species]
Memory/cognitive improvement/reduced memory impairment/improved learning	<i>Acorus gramineus</i> , <i>Aframomum melegueta</i> , <i>Albizia adianthifolia</i> , <i>Albizia lebbeck</i> , <i>Allium sativum</i> , <i>Allium cepa</i> , <i>Alpinia galanga</i> , <i>Alstonia scholaris</i> , <i>Anacyclus pyrethrum</i> , <i>Ananas comosus</i> , <i>Anethum graveolens</i> , <i>Averrhoa carambola</i> , <i>Bacopa monnieri</i> , <i>Borago officinalis</i> , <i>Boswellia serrata</i> , <i>Butea monosperma</i> , <i>Cajanus cajan</i> , <i>Calendula officinalis</i> , <i>Camellia sinensis</i> , <i>Caralluma tuberculata</i> , <i>Carthamus tinctorius</i> , <i>Celastrus paniculatus</i> , <i>Centella asiatica</i> , <i>Chromolaena odorata</i> , <i>Cinnamomum verum</i> , <i>Cissampelos pareira</i> , <i>Citrus paradisi</i> , <i>Cocos nucifera</i> , <i>Cola acuminata</i> , <i>Convolvulus prostratus</i> , <i>Corylus avellana</i> , <i>Curcuma longa</i> , <i>Cuscuta chinensis</i> , <i>Cynara scolymus</i> , <i>Cyperus rotundus</i> ,



Neurogenic/neurotrophic/increases BDNF or NGF expression/ neuronal growth stimulus/ induces neurite outgrowth/ stimulates neural regeneration / reversed neurodegeneration	<i>Acorus gramineus, Acridocarpus orientalis, Adansonia digitata, Aloe vera, Anacardium occidentale, Artemisia annua, Asparagus racemosus, Bacopa monnieri, Boswellia sacra, Camellia sinensis, Calotropis procera, Carissa carandas, Centella asiatica, Citrus x aurantiurn, Croton tiglium, Curcuma longa, Elaeis guineensis, Embelia ribes, Garcinia xanthochymus, Leonurus cardiaca, Matricaria chamomilla, Moringa oleifera, Opuntia ficus-indica, Panax japonicus, Panax quinquefolius, Passiflora edulis, Prunella vulgaris, Pueraria montana, Rosmarinus officinalis, Solanum sisymbriifolium, Tinospora cordifolia, Vitis vinifera, Withania somnifera, Zingiber officinale</i> [sister spp.]: <i>Alpinia katsumadai, Dioscorea japonica, Momordica cochinchinensis, Ribes fasciculatum, Stephania tetrandra, Uncaria rhynchophylla, Vaccinium spp.</i>
Anti-oxidant/ reduced oxidative stress/ free radical scavenging/ reduced lipid peroxidation/reduced ROS/NO/ Fe2+ chelating	<i>Acer cinerascens, Achyranthes aspera, Adansonia digitata, Aframomum melegueta, Afrotyrax lepidophyllum, Allium cepa, Allium fistulosum, Allium rubellum, Allium schoenoprosum, Aloe harlana, Alpinia galanga, Anethum graveolens, Annona muricata, Anoda cristata, Antherotoma senegambiensis, Aquilaria malaccensis, Aristotelia chilensis, Artemisia absinthium, Artemisia annua, Artemisia indica, Artemisia judaica, Artemisia vulgaris, Asphodelus aestivus, Asphodelus tenuifolius, Astronium urundeuva, Asystasia nemorum, Bergenia ciliata, Bertholletia excelsa, Beta vulgaris, Bixa orellana, Blumea balsamifera, Boerhavia erecta, Borago officinalis, Brocchia cinerea, Buddleja mendozensis, Butea monosperma, Camellia sinensis, Capparis cartilaginea, Capsicum annum, Caralluma tuberculata, Carissa carandas, Carissa edulis, Carthamus tinctorius, Caryocar brasiliense, Cassia fistula, Castanea sativa, Ceiba pentandra, Celtis toka, Chuquiraga spinosa, Cissus adnata, Citrus sinensis, Citrus x aurantium, Clerodendrum cyrtophyllum, Cochlospermum regium, Cocos nucifera, Coffea arabica, Cola acuminata, Colubrina asiatica, Corchorus olitorius, Cornus mas, Cornus officinalis, Corylus avellana, Costus afer, Crataegus spp., Crotalaria pallida, Cuminum cyminum, Curatella americana, Curculigo pilosa, Cymbopogon citratus, Cynara scolymus, Daphniphyllum himalense, Desmodium heterocarpon, Dipteryx alata, Dirca palustris, Duguetia furfuracea, Ehretia cymosa, Elettaria cardamomum, Eleusine indica, Emilia abyssinica, Ephedra gerardiana, Erechthites hieracifolia, Erythrina abyssinica, Eugenia dysenterica, Eugenia uniflora, Euphorbia tirucalli, Ficus carica, Ficus exasperata, Ficus microcarpa, Ficus natalensis, Foeniculum vulgare, Forsythia suspensa, Fraxinus chinensis, Galium verum, Gardenia jasminoides, Genipa americana, Glycine max, Glyphaea brevis, Globularia alypum, Gomphrena globosa, Gunnera tinctoria, Gymnosporia senegalensis, Hancornia speciosa, Haplophyllum tuberculatum, Helianthus annuus, Helicteres isora, Heliotropium bacciferum, Hibiscus tilfaceus, Hippophae rhamnoides, Hymenocardia acida, Jasminum nervosum, Kyllinga brevifolia, Kyllinga nemoralis, Lablab purpureus, Lagerstroemia speciosa, Laurus nobilis, Lepidium sativum, Leucas aspera, Leucas cephalotes, Lippia integrifolia, Lophira lanceolata, Ludwigia peruviana, Luma chequen, Lycium intricatum, Maclura tinctoria, Mauritia flexuosa, Mentha arvensis, Mentha x piperita, Mimosa pigra, Mollugo nudicaulis, Monstera deliciosa, Morinda citrifolia, Morinda umbellata, Moringa oleifera, Myristica fragrans, Myracrodruon urundeuva, Myroxylon peruiferum, Nymphaea nouchali, Ocimum americanum, Ocimum basilicum, Ocimum tenuiflorum, Olea europaea, Opuntia humifusa, Origanum vulgare, Oxalis corniculata, Paliurus spina-christi, Panax quinquefolius, Passiflora edulis, Passiflora ligularis, Phlogacanthus thyrsiformis, Phthirusa pyrifolia, Phyllanthus emblica, Pilea microphylla, Pimpinella anisum, Piper capense, Piper nigrum, Pisum sativum, Pistacia atlantica, Plectranthus barbatus, Plumbago indica, Poincianella pluviosa, Polygonatum sibiricum, Polyscias guilfoylei, Pongamia pinnata, Potentilla freyniana, Protium heptaphyllum, Prunus cerasoides, Prunus spinosa, Psidium guajava, Pulicaria undulata, Punica granatum, Quassia undulata, Rauvolfia vomitoria, Rhododendron arboreum, Rosa canina, Rosmarinus officinalis, Rubus buergeri, Rubus glaucus, Salvia aegyptiaca, Saccharum officinarum, Salvia tomentosa, Sambucus australis, Senna tora, Sansevieria trifasciata, Silybum marianum, Solanum lycocarpum, Solanum lycopersicum, Solanum melongena, Solanum sisymbriifolium, Solanum torvum, Solanum tuberosum, Sonchus oleraceus, Spathodea campanulata, Spondias dulcis, Strychnodendron obovatum, Swertia ciliata, Swertia racemosa, Syzygium aromaticum, Tamarix aphylla, Thalictrum foliolosum, Thonningia sanguinea, Thymbra capitata, Thymus linearis, Thymus satureioides, Thymus serpyllum, Thymus vulgaris, Tilia tomentosa, Tinospora cordifolia, Trema orientalis, Trianthema portulacastrum, Tridax procumbens, Trigonella foenum-graecum, Tylophora indica, Uraria picta, Urtica dioica, Vitis vinifera, Waltheria indica, Waltheria ovata, Zanthoxylum armatum, Zingiber officinale</i> [sister spp.]: <i>Acacia hydaspica, Acacia salicina, Byttneria pilosa, Campomanesia xanthocarpa, Cinnamomum cassia, Daucus carota, Eurya japonica, Lonicera cerulea, Musa acuminata, Piper nigrum, Rubus jamaicensis, Saussurea pulvinata, Selaginella tamariscina, Taraxacum coreanum, Vaccinium angustifolium, Vaccinium uliginosum</i>
Immunomodulation/ immunostimulatory	<i>Acacia nilotica, Acmella oleracea, Allium sativum, Alpinia galanga, Alstonia scholaris, Anacyclus pyrethrum, Anastatica hierochuntica, Apium graveolens, Artemisia annua, Asparagus racemosus, Astragalus complanatus, Berberis integerrima, Bidens pilosa, Brassica rapa, Carica papaya, Codonopsis pilosula, Commiphora myrrha, Cornus mas, Cornus officinalis, Equisetum giganteum, Mangifera indica, Maranta arundinacea, Moringa oleifera, Origanum vulgare, Panax japonicus, Panax quinquefolius, Pennisetum glaucum, Petroselinum crispum, Piper betle, Pisum sativum, Platycodon grandiflorum, Polygonatum sibiricum, Prunella vulgaris, Sambucus javanica, Solanum muricatum, Solanum nigrum, Sorghum bicolor, Thymus serpyllum, Thymus vulgaris, Tinospora cordifolia, Trichopus zeylanicus, Uncaria tomentosa, Vigna unguiculata, Vitis vinifera, Warburgia ugandensis, Withania somnifera</i> [sister spp.]: <i>Boswellia spp., Lemna minor, Salvia miltiorrhiza, Trichospermum galeottii</i>
Reduced neural cell death/apoptosis/reduced neuronal loss	<i>Andrographis paniculata, Artemisia judaica, Averrhoa carambola, Citrus limon, Citrus x aurantiurn, Eriobotrya japonica, Fibraurea recisa, Ipomoea batatas, Mangifera indica, Matricaria chamomilla, Melissa officinalis, Morinda citrifolia, Moringa oleifera, Mucuna pruriens, Nymphaea nouchali, Olea europaea, Origanum vulgare, Panax quinquefolius, Perilla frutescens, Platycodon grandiflorum, Senna tora, Solanum tuberosum, Withania somnifera, Zanthoxylum capense, Zingiber officinale</i> [sister spp.]: <i>Astragalus membranaceus, Citrus spp., Coptis spp., Salvia miltiorrhiza, Saussurea pulvinata, Selaginella tamariscina, Uncaria rhynchophylla, Vaccinium spp.</i>

Increased Nrf2 expression	<i>Bertholletia excelsa, Camellia sinensis, Carica papaya, Cinnamomum verum, Coffea arabica, Crataegus spp., Nasturtium officinale, Piper nigrum, Plumbago zeylanica, Solanum lycopersicum, Vitis vinifera, Zingiber zerumbet</i>
Supports or protects mitochondria/ maintain mitochondrial /function/enhanced mitochondrial biogenesis/ reversal of lost mitochondrial function.	<i>Apium graveolens, Boerhavia diffusa, Brassica oleracea, Carissa carandas, Carthamus tinctorius, Centella asiatica, Cinnamomum spp., Citrus x aurantium, Citrus maxima, Citrus paradisi, Cocos nucifera, Eurya japonica, Glycyrrhiza uralensis, Hippophae rhamnoides, Juglans regia, Mangifera indica, Matricaria chamomilla, Paullinia cupana, Platycodon grandiflorum, Rosmarinus officinalis, Rubus sp., Solanum dasypodium, Solanum indicum, Theobroma cacao, Viscum coloratum, Vitis vinifera, Withania somnifera</i> [sister spp.]: <i>Rubus nigrum</i>
Anti-fatigue/energy-boosting	<i>Adansonia digitata, Arctium lappa, Bambusa tulda, Carthamus tinctorius, Gynostemma pentaphyllum, Hippophae rhamnoides, Ipomoea batatas, Juglans regia, Mentha arvensis, Moringa oleifera, Morus alba, Panax quinquefolius, Passiflora edulis, Pholidota chinensis, Phyllanthus emblica, Portulaca oleracea, Viscum coloratum</i> [sister spp.]: <i>Cinnamomum cassia, Polygonatum spp. Ribes nigrum</i>
DNA damage protection, reduced DNA damage	<i>Fagopyrum esculentum, Hibiscus acetosella, Mentha arvensis, Ocimum tenuiflorum, Olea europaea, Pilea microphylla, Saccharum officinarum, Uncaria tomentosa</i>

#### Group 4 Vascular bioactivities

Bioactivity category	Species [+ sister species]
Anti-hypertensive/ vasodilatory/ vasorelaxant	<i>Acalypha wilkesiana, Achillea santolinoides, Allium cepa, Allium sativum, Alpinia zerumbet, Alstonia scholaris, Andrographis paniculata, Aniba canellae, Annona muricata, Apium graveolens, Arctium lappa, Ardisia crenata, Asteriscus graveolens, Artemisia scoparia, Artocarpus altilis, Aspidosperma subincanum, Averrhoa bilimbi, Azadirachta indica, Bambusa tulda, Beta vulgaris, Bidens pilosa, Camellia sinensis, Cajanus cajan, Camellia sinensis, Capraria biflora, Carica papaya, Centella asiatica, Citrus limetta, Citrus limon, Clausena anisata, Cornus mas, Crataegus spp., Crataeva adansonii, Croton schiedeanus, Cucurbita pepo, Cymbopogon citratus, Dioscorea alata, Dysphania ambrosioides, Elaeis guineensis, Fagopyrum esculentum, Ferula communis, Ficus carica, Fuchsia magellanica, Hancornia speciosa, Harungana madagascariensis, Helianthus annuus, Helichrysum meadowianum, Heracleum sphondylium, Hibiscus sabdariffa, Hymenocardia acida, Imperata cylindrica, Ipomoea batatas, Juglans regia, Kalanchoe pinnata, Kigelia africana, Justicia secunda, Lagenaria siceraria, Laurelia sempervirens, Leonurus cardiaca, Lepidium sativum, Lippia alba, Lippia multiflora, Lophira lanceolata, Lycopus lucidus, Mangifera indica, Medicago sativa, Melissa officinalis, Mentha arvensis, Mentha pulegium, Mentha spicata, Mimosa pigra, Morinda citrifolia, Morus alba, Musa x paradisiaca, Myrtus communis, Ocimum basilicum, Olea europaea, Oxalis corniculata, Panax japonicus, Panax quinquefolius, Peganum harmala, Peperomia pellucida, Persea americana, Petroselinum crispum, Phyllanthus acidus, Phyllanthus amarus, Phyllanthus emblica, Phyllanthus urinaria, Pisum sativum, Plantago asiatica, Platycodon grandiflorum, Prunella vulgaris, Psittacanthus calyculatus, Punica granatum, Rauvolfia verticillata, Salvia officinalis, Salvia scutellarioides, Scrophularia ningpoensis, Sechium edule, Smilax aristolochiifolia, Solanum aethiopicum, Solanum lycopersicum, Solanum marginatum, Solanum melongena, Solanum muricatum, Solanum tuberosum, Solanum torvum, Stachytarpheta jamaicensis, Stevia rebaudiana, Terminalia arjuna, Terminalia catappa, Theobroma cacao, Tridax procumbens, Uncaria sessiliflora, Uncaria sinensis, Urtica dioica, Vaccinium arctostaphylos, Vaccinium myrtillus, Vernonia amygdalina, Viola odorata, Vitis vinifera, Zanthoxylum rhoifolium, Zea mays, Zingiber officinale</i> [sister spp.]: <i>Cinnamomum cassia, Canarium schweinfurthii, Crataegus curvisepala, Maxillaria densa, Mentha x villosa, Piper truncatum</i>
Anti-atherosclerotic/ reduced arterial stiffness/anti-atherogenic/cardioprotective	<i>Aloe vera, Carthamus tinctorius, Caulophyllum robustum, Citrus sinensis, Cynara scolymus, Leonurus sibiricus, Morinda citrifolia, Moringa oleifera, Platycodon grandiflorum, Polygonatum sibiricum, Ziziphus nummularia</i> [sister spp.]: <i>Virola oleifera</i>
Decreased total cholesterol/ anti-dyslipidemic/anti-hyperlipidemia/ improved lipid profile/ increased lipolysis	<i>Achillea santolinoides, Aerva lanata, Aloe vera, Alpinia zerumbet, Ananas comosus, Anethum graveolens, Arctium lappa, Artemisia vulgaris, Artocarpus altilis, Asparagus officinalis, Bambusa tulda, Berberis integrifolia, Bixa orellana, Borago officinalis, Breynia vitis-idaea, Camellia sinensis, Carthamus tinctorius, Casearia esculenta, Chenopodium quinoa, Citrullus colocynthis, Cornus mas, Cuphea carthagenensis, Curatella americana, Cyphomandra betacea, Dipteryx alata, Fagopyrum esculentum, Ficus carica, Ficus microcarpa, Gardenia jasminoides, Gymnema sylvestre, Holoptelea integrifolia, Leonurus sibiricus, Morinda citrifolia, Morus alba, Morus nigra, Olea europaea, Paederia foetida, Paliurus spina-christi, Paullinia cupana, Phyllanthus niruri, Polygonatum sibiricum, Punica granatum, Rosmarinus officinalis, Salvia officinalis, Tamarindus indica, Teucrium polium, Trianthema portulacastrum, Trigonella foenum-graecum, Viola odorata, Ziziphus oenoplia</i> [sister spp.]: <i>Campomanesia xanthocarpa, Lonicera cerulea, Senecio serruloides</i>
Anti-platelet agglutination/aggregation/ Anti- PAF/ reduced increased vascular permeability/ Improved endothelial function/ thrombolytic/endothelial progenitor cell mobilization/ improved vascular function/cardioprotective	<i>Acacia modesta, Acacia nilotica, Allium jesdianum, Alocasia macrorrhizos, Althaea officinalis, Apium graveolens, Arctium lappa, Ardisia crenata, Asteromyrtus symphyocarp, Camellia sinensis, Cestrum parqui, Chiladenus iphionoides, Chromolaena odorata, Crataegus spp., Ficus carica, Heliotropium indicum, Hordeum vulgare, Leonurus cardiaca, Leonurus sibiricus, Luma apiculata, Malus pumila, Mauritia flexuosa, Oenanthe javanica, Olea europaea, Opuntia ficus-indica, Perilla frutescens, Petroselinum crispum, Phyllanthus amarus, Pisum sativum, Portulaca oleracea, Prunella vulgaris, Rubia cordifolia, Sechium edule, Solanum torvum, Solanum tuberosum, Spondias dulcis, Terminalia arjuna, Thymus vulgaris, Tinospora cordifolia, Toddalia asiatica, Trevesia palmata, Tussilago farfara, Typha angustifolia, Viscum coloratum, Zingiber officinale</i> [sister spp.]: <i>Barleria lupulina, Campomanesia xanthocarpa, Ocotea duckei, Pogostemon cablin, Stephanotis tetrandra</i>

**Group 5 All other categories**

Bioactivity category	Species [+ sister species]
Anti-microbial	768 species: See Supplementary File 1
Anxiolytic/anti-stress/anti-convulsant/ sedative/anti-depressant/mood modulation /anti-psychotic	<i>Acacia karroo, Achyranthes aspera, Adansonia digitata, Albizia lebbeck, Albizia zygia, Allium sativum, Alstonia scholaris, Annona muricata, Apium graveolens, Artemisia absinthium, Artemisia vulgaris, Asparagus racemosus, Benincasa hispida, Bixa orellana, Borago officinalis, Cajanus cajan, Caladium bicolor, Carissa carandas, Carissa edulis, Cassia fistula, Citrus maxima, Citrus sinensis, Citrus x aurantium, Clausena anisata, Clerodendrum infortunatum, Cinnamomum tamala, Cinnamomum verum, Commiphora gileadensis, Corylus avellana, Cymbopogon citratus, Discaria americana, Elaeis guineensis, Euphorbia hirta, Evolvulus alsinoides, Ficus platyphylla, Ficus sur, Glyphaea brevis, Jatropha curcas, Lactuca serriola, Lafoensia pacari, Leea guineensis, Leonurus cardiaca, Lippia alba, Ludwigia repens, Matricaria chamomilla, Melissa officinalis, Mentha longifolia, Menta x piperita, Mercurialis annua, Mimosa pudica, Moringa oleifera, Mucuna pruriens, Musa x paradisiaca, Myristica fragrans, Nymphaea lotus, Olea europaea, Origanum majorana, Paederia foetida, Passiflora edulis, Passiflora foetida, Peganum harmala, Pergularia daemia, Phoenix sylvestris, Phyllanthus amarus, Plectranthus amboinicus, Polypodium vulgare, Protium heptaphyllum, Psidium guajava, Punica granatum, Rosa canina, Ruta graveolens, Sechium edule, Senna occidentalis, Stereospermum kunthianum, Tephrosia purpurea, Thymus vulgaris, Tinospora cordifolia, Urtica dioica, Valeriana officinalis, Vitex negundo, Waltheria indica, Withania somnifera, Zanthoxylum capense, Zingiber officinale</i>
Anti-aging, increased longevity	<i>Allium sativum, Camellia sinensis, Forsythia suspense, Mentha piperata, Moringa oleifera, Ocimum tenuiflorum, Phyllanthus emblica, Polygonatum sibiricum Silybum marianum, Theobroma cacao, Vaccinium spp., Vitis vinifera, Zataria multiflora</i>

Abbreviations GCase,  $\beta$ -glucocerebrosidase; GSL, Glycosphingolipid